



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,464	11/21/2003	Jean-Francois Saint Etienne	245500US41X DIV	8116

22850 7590 05/08/2007
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

HAILE, FEBEN

ART UNIT	PAPER NUMBER
----------	--------------

2616

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

05/08/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/717,464	Applicant(s) SAINT ETIENNE ET AL.	
	Examiner Feben M. Haile	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>February 23, 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Art Unit: 2616

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-9 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 9-17 of copending U.S. Application No.10/287,912, hereinafter referred to as Saint Etienne et al. Although the conflicting claims are not identical, they are variations of each other that are not patentably distinct.

Regarding claim 1, Saint Etienne et al. discloses in a transmission service, allowing an application to access virtual links in transmission, the transmission service configured to multiplex virtual links to a physical link through an Ethernet interface; and for each virtual link, sending packets as a function of passband allocated to the respective virtual link; checking time characteristics of the packets in a passband protection service in the switch for each incoming virtual link; and destroying the packets if the allowable characteristics are exceeded, to prevent a failure in a transmitter or a virtual link from compromising traffic in other virtual links leaving the switch (**claim 9**).

The instant application merely broadens the scope of the copending application by eliminating the limitation "the passband of a virtual link being substantially equal to: (packet size)/(minimum inter-packet time), the sum of passbands of the virtual links in transmission being less than about 5 Mbits/s".

It would have been obvious to one having ordinary skill in the art at the time invention was made to eliminate limitations that are not unnecessary for their invention and to rephrase elements so long as the unit or element under different name would

perform the same function. Furthermore, it has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ 184 (CCPA).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Regarding claim 2, Saint Etienne et al. discloses in a reception service, decoding packets, checked that a format of the decoded packets is correct, and making useful data available to applications (**claim 10**).

Regarding claim 3, Saint Etienne et al. discloses a network redundancy service at subscriber level, to implement network redundancy, that is transparent for applications to avoid problems caused by failure of a switch or an interface (**claim 11**).

Regarding claim 4, Saint Etienne et al. discloses performing a sampling service in a destination equipment that only presents a last received value to a user, and wherein the last value is systematically overwritten by a new received packet (**claim 12**).

Regarding claim 5, Saint Etienne et al. discloses performing a queuing service in a destination equipment that presents all data that the destination equipment: sending information that an addressee does not want to lose; and sending information larger than a maximum packet size of the virtual link, the transmission service then breaking down the data into packets, the reception service reformatting the data to make reformatted data available to the receiving application (**claim 13**).

Regarding claim 6, Saint Etienne et al. discloses performing a file transfer source in which a data file is transferred, the transmission service breaking the data file down into packets that are then transmitted sequentially, the reception service rebuilding the data file (**claim 14**).

Regarding claim 7, Saint Etienne et al. discloses a passband and an inter-packet time are assigned for each virtual link (**claim 15**).

Regarding claim 8, Saint Etienne et al. discloses a subscriber in reception, refining a selection of packets on a same virtual link, by using network addressing information contained in the packet (**claim 16**).

Regarding claim 9, Saint Etienne et al. discloses achieving data integrity on each packet by a CRC that makes a calculation to validate data transmitted in the packet, checking each packet at each network equipment input, and destroying all bad packets (**claim 17**).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2 and 5-6 rejected under 35 U.S.C. 103(a) as being unpatentable over Katsube et al. (US 6,188,689), hereinafter referred to as Katsube.

Regarding claim 1, Katsube discloses in a transmission service, allowing an application to access virtual links in transmission, the transmission service configured to multiplex virtual links to a physical link through an Ethernet interface (**figures 5(a-b); a Sending Host 311 including IP and MAC applications that transmit packets using Dedicated Virtual Data Links x1 and x2, which are multiplexed together by an Ethernet 321, to a Router 341**); and for each virtual link, sending packets as a function of passband allocated to the respective virtual link (**figure 10; packets sent by Ethernet 321 are received at the Router 341 by Ethernet I/F boards 93-95, which perform processes and operations related to the dedicated virtual links**).

At the time the invention was made, it would have been obvious to one having ordinary skill in the art that (1) the Ethernet I/F boards 93-95 use a fixed passband and (2) if the number of packets sent by x1 and x2 exceed the capacity of the Ethernet I/F boards 93-95, the Router 341 would discard them. The motivation being to provide minimum relative loss or maximum relative gain. Therefore, Katsube does essentially suggest the limitations checking time characteristics of the packets in a passband protection service in the switch for each incoming virtual link; and destroying the packets if the allowable characteristics are exceeded, to prevent a failure in a transmitter or a virtual link from compromising traffic in other virtual links leaving the switch.

Regarding claim 2, Katsube discloses in a reception service, decoding packets, checked that a format of the decoded packets is correct, and making useful data

available to applications (**figure 7; Ethernet Receiving Section 78 and IP Processing Section 73**).

Regarding claim 5, Katsube discloses sending information that an addressee does not want to lose (**column 8 lines 33-38; TCP; i.e. a connection oriented reliability service**); and sending information larger than a maximum packet size of the virtual link (**figures 5(a-b); IP applications; i.e. a limitation is based on a network's maximum transfer unit or MTU**), the transmission service then breaking down the data into packets (**figures 5(a-b); the Sending Host 311 IP and MAC applications, i.e. a packet/frame fragmentation function**), the reception service reformatting the data to make reformatted data available to the receiving application (**figures 5(a-b); a Receiving Host 312 IP and MAC applications, i.e. a packet/frame fragmentation reassembly function**).

At the time the invention was made, it would have been obvious to one having ordinary skill in the art that IP applications provide caching services. The motivation being to provide reliability by ensuring in order delivery. Therefore, Katsube does essentially suggest the limitations performing a queuing service in a destination equipment that presents all data that the destination equipment.

Regarding claim 6, Katsube discloses performing a file transfer source in which a data file is transferred, the transmission service breaking the data file down into packets that are then transmitted sequentially, the reception service rebuilding the data file (**figures 5(a-b); Sending Host 311 IP and MAC applications, i.e. a packet/frame**

fragmentation function and Receiving Host 312 IP and MAC applications, i.e. a packet/frame fragmentation reassembly function).

4. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Katsube et al. (US 6,188,689), hereinafter referred to as Katsube, in view of Imanaka et al. (US 6,272,669), hereinafter referred to as Imanaka.

Regarding claim 3, Katsube discloses the limitations of the base claim.

Katsube fails to explicitly suggest a network redundancy service at subscriber level, to implement network redundancy, that is transparent for applications to avoid problems caused by failure of a switch or an interface.

Imanaka teaches an Ethernet communications network including System-A Communication Line 1 and System-B Communication Line 2, where Nodes 10 and 20 have a connection to each of the two systems (**figure 1**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the communication redundancy taught by Imanaka into the Ethernet network disclosed by Katsube. The motivation for such a modification is a scheme that can exchange measurement data and control commands without any great delay.

5. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Katsube et al. (US 6,188,689), hereinafter referred to as Katsube, in view of Mielke et al. (US 6,799,037), hereinafter referred to as Mielke.

Regarding claim 4, Katsube discloses the limitations of the base claim.

Katsube fails to explicitly suggest performing a sampling service in a destination equipment that only presents a last received value to a user, and wherein the last value is systematically overwritten by a new received packet.

Mielke teaches a method for transmitting files from a Ground Switching Station 200 to an Aircraft Unit 500 where the files are stored in a Switch Control Processor 220 at the Ground Switching Station 200 (**figure 1**) and may be updates for an application software loaded on the Aircraft Unit 500 (**column 4 lines 51-55**).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to implement the updating process taught by Mielke into the Ethernet network disclosed by Katsube. The motivation for such a modification is to reflect more advanced versions of a software application thus efficiently transferring data files between a ground switching station and an aircraft.

6. Claims 7-9 rejected under 35 U.S.C. 103(a) as being unpatentable over Katsube et al. (US 6,188,689), hereinafter referred to as Katsube, in view of Lauck et al. (US 6,615,271), hereinafter referred to as Lauck.

Regarding claim 7, Katsube discloses the limitations of the base claim. Furthermore, Katsube suggests packets sent by Ethernet 321 are received at the Router 341 by Ethernet I/F boards 93-95, which perform processes and operations related to the dedicated virtual links (**figure 10**). At the time the invention was made, it would have been obvious to one having ordinary skill in the art that (1) the Ethernet I/F boards 93-95 use a fixed passband. The motivation being to provide minimum relative loss or maximum relative gain.

However, Katsue fails to explicitly teach wherein an inter-packet time are assigned for each virtual link.

Lauck teaches a method for a communication network having distributed rate calculation and link flow control using an Inter Packet Gap (**figure 10**).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to implement the traffic control method taught by Lauck into the Ethernet network disclosed by Katsube. The motivation for such a modification is scaling to a large number of virtual circuits and responding quickly to a change in the number of established virtual circuits.

Regarding claim 8, Katsube discloses a subscriber in reception, refining a selection of packets on a same virtual link, by using network addressing information contained in the packet (**figure 2; MAC addresses of a frame**).

Regarding claim 9, Katsube discloses achieving data integrity on each packet by a CRC that makes a calculation to validate data transmitted in the packet, checking each packet at each network equipment input, and destroying all bad packets (**figure 1 and column 5 lines 8-21; a frame including a Frame Check Sequence 18 where a 32-bit CRC is entered**).

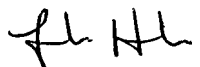
Conclusion

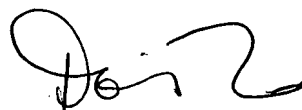
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Feben M. Haile whose telephone number is (571) 272-3072. The examiner can normally be reached on 6:00am - 3:30pm.

Art Unit: 2616

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


4/27/2007



DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600